PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Anthony R.M. COATES et al

Appln. No.: **Continuation of PCT/GB99/03728**

Group Art Unit: **0000**

Filed: **April 27, 2001**

Examiner: **Unknown**

For: **SCREENING PROCESS FOR ANTIBACTERIAL AGENTS**

PRELIMINARY AMENDMENT

Assistant Commissioner
of Patents
Washington, D.C. 20231

Sir:

Prior to examining the above-identified application, please amend the application as follows.

IN THE SPECIFICATION:

Please amend the specification as follows:

Page 1, before line 5, insert

-- This Application is a Continuation of PCT/GB99/03728 filed November 9, 1999, which claims benefit of priority under 35 U.S.C. § 365(c) and § 120; which claims benefit under 35 U.S.C. § 119(e) of U.S. Provisional Application No. 60/107,655, filed November 9, 1998. The disclosure of PCT/GB99/03728 is incorporated herein by reference. --.

IN THE CLAIMS:

Please amend the claims as follows:

Claim 3. (Amended) A method as claimed in claim 1, wherein said antibacterial agent is used at a concentration of 25 to 150μg/ml with bacteria present at a concentration of 10^5 to 10^9 bacteria/ml.

Claim 4. (Amended) A method as claimed in claim 1, wherein said bacteria are *Staphylococcus aureus*, *Escherichia coli*, *Haemophilus influenzae*, *Streptococcus pyogenes*, *Streptococcus gordonii* or *Mycobacterium tuberculosis*.

Claim 5. (Amended) A method as claimed in claim 1, wherein said bacteria are *Mycobacterium tuberculosis* and said antibacterial agent is rifampicin.

Claim 6. (Amended) A method as claimed in claim 1, wherein said bacteria are *Escherichia coli* and said antibacterial agent is kanamycin.

Claim 7. (Amended) A method as claimed in claim 1, wherein said bacteria are *Staphylococcus aureus* and said antibacterial agent is ampicillin.

Claim 8. (Amended) A phenoyptically antibiotic-resistant subpopulation of stationary phase bacteria, obtainable by a method as defined in claim 1.

Claim 9. (Amended) A process for assessing the antibacterial activity of a test compound or agent or for isolating a compound or agent having antibacterial activity against stationary phase bacteria comprising the steps of:

(i) preparing a phenotypically antibiotic-resistant subpopulation of stationary phase bacteria according to the method defined in claim 1;

(ii) incubating a sample of said phenotypically resistant subpopulation with one or more test compounds or agents; and

(iii) assessing any antibacterial effects against said phenotypically resistant subpopulation and optionally isolating a compound or agent exhibiting antibacterial activity.

Claim 11. (Amended) An antibacterial agent identified or prepared according to the process defined in claim 10.

Claim 13. (Amended) A composition comprising an antibacterial agent or chemical compound as defined in claim 12 and a pharmaceutically acceptable excipient or diluent.

Claim 14. (Amended)A formulation comprising at least one antibacterial agent having activity against actively growing bacteria and at least one antibacterial agent or chemical compound having activity against a phenotypically antibiotic-resistant subpopulation of stationary phase bacteria as defined in claim 13, wherein said formulation is presented as a combined preparation for simultaneous, separate or sequential use in the treatment of a bacterial infection.

Claim 15. (Amended) An antibacterial agent or chemical compound as defined in claim 13 for use in the treatment of a bacterial infection.

Claim 16. (Amended) Use of an antibacterial agent or chemical compound as defined in claim 13 in the preparation of a medicament for the treatment of a bacterial infection.

Claim 17. (Amended) A method of treating of a bacterial infection comprising administering to a patient in need of such therapy an effective amount of an antibacterial agent or chemical compound as defined in claim 13.

Claim 19. (Amended) A formulation, agent, compound, use of method as claimed in claim 14, where said bacterial infection is characterized by a subpopulation of persistent bacteria which may enter a dormant phase after infection.

REMARKS

The specification has been amended to insert formal matter and the claims have amended to delete their multiply dependency in order to make the application consistent with U.S. patent practice. Hence, the amendment of the specification and claims does not constitute new matter.

The Examiner is invited to contact the undersigned at his Washington telephone number on any questions which might arise.

Respectfully submitted,

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Date: April 27, 2001

APPENDIX

Marked-up Version of Amended Application

The Specification is amended as follows:

Page 1, before line 5, insert

-- This Application is a Continuation of PCT/GB99/03728 filed November 9, 1999, which claims benefit of priority under 35 U.S.C. § 365(c) and § 120; which claims benefit under 35 U.S.C. § 119(e) of U.S. Provisional Application No. 60/107,655, filed November 9, 1998. The disclosure of PCT/GB99/03728 is incorporated herein by reference. --.

The Claims are amended as follows:

Claim 3. (Amended) A method as claimed in claim 1, [or 2] wherein said antibacterial agent is used at a concentration of 25 to 150μg/ml with bacteria present at a concentration of 10^5 to 10^9 bacteria/ml.

Claim 4. (Amended) A method as claimed in [any one of claims 1 to 3] claim 1, wherein said bacteria are *Staphylococcus aureus*, *Escherichia coli*, *Haemophilus influenzae*, *Streptococcus pyogenes*, *Streptococcus gordonii* or *Mycobacterium tuberculosis*.

Claim 5. (Amended) A method as claimed in [any one of claims 1 to 4] claim 1, wherein said bacteria are *Mycobacterium tuberculosis* and said antibacterial agent is rifampicin.

Claim 6. (Amended) A method as claimed in [any one of claims 1 to 4] claim 1, wherein said bacteria are *Escherichia coli* and said antibacterial agent is kanamycin.

Claim 7. (Amended) A method as claimed in [any one of claims 1 to 4] claim 1, wherein said bacteria are

Staphylococcus aureus and said antibacterial agent is ampicillin.

Claim 8. (Amended) A phenoyptically antibiotic-resistant subpopulation of stationary phase bacteria, obtainable by a method as defined in [any one of claims 1 to 7] claim 1.

Claim 9. (Amended) A process for assessing the antibacterial activity of a test compound or agent or for isolating a compound or agent having antibacterial activity against stationary phase bacteria comprising the steps of:

(i) preparing a phenotypically antibiotic-resistant subpopulation of stationary phase bacteria according to the method defined in [an one of claims 1 to 7] claim 1;

(ii) incubating a sample of said phenotypically resistant subpopulation with one or more test compounds or agents; and

(iii) assessing any antibacterial effects against said phenotypically resistant subpopulation and optionally isolating a compound or agent exhibiting antibacterial activity.

Claim 11. (Amended) An antibacterial agent identified or prepared according to the process defined in claim [9 or] 10.

Claim 13. (Amended) A composition comprising an antibacterial agent or chemical compound as defined in claim [11 or] 12 and a pharmaceutically acceptable excipient or diluent.

Claim 14. (Amended)A formulation comprising at least one antibacterial agent having activity against actively growing bacteria and at least one antibacterial agent or chemical compound having activity against a phenotypically antibiotic-resistant subpopulation of stationary phase bacteria as defined in claim [12 or] 13, wherein said formulation is presented as a combined preparation for simultaneous, separate or sequential use in the treatment of a bacterial infection.

Claim 15. (Amended) An antibacterial agent or chemical compound as defined in claim [12 or] 13 for use in the treatment of a bacterial infection.

Claim 16. (Amended) Use of an antibacterial agent or chemical compound as defined in claim [12 or] 13 in the preparation of a medicament for the treatment of a bacterial infection.

Claim 17. (Amended) A method of treating of a bacterial infection comprising administering to a patient in need of such therapy an effective amount of an antibacterial agent or chemical compound as defined in claim [12 or] 13.

Claim 19. (Amended) A formulation, agent, compound, use of method as claimed in [any one of] claim 14 [to 18], where said bacterial infection is characterized by a subpopulation of persistent bacteria which may enter a dormant phase after infection.